

WHAT IS CLAIMED IS

1. A measuring system comprising:

a mass spectrometer; and

an ion source for performing ionization of a sample by causing a corona discharge at a tip end of a needle electrode by applying a high voltage, and for restricting a signal strength with respect to a mass number of NO_3^- generated by a negative corona discharge in a region of said corona discharge by restricting NO_3^- generating reaction by reaction of O_2^- and N_2 for measuring a fine component in a gas selected among a group of chlorophenols (CP), dioxins, chlorobenzenes, chlorophenols, hydrocarbins, nitro compounds a precursor of said dioxins.

2. A measuring system comprising:

a mass spectrometer; and

an ion source for performing ionization of a sample by causing a corona discharge at a tip end of a needle electrode by applying a high voltage, and for measuring a signal strength of dichlorophenol with respect to a mass number of NO_3^- generated as intermediate by O_2^- by restricting the signal strength to be smaller than that of dichlorophenol.

3. A monitoring system comprising:

an exhaust passage for discharging gas of combustion;

a sampling pipe for collecting said gas in a part of said exhaust passage;

a filter for removing unnecessary components of the gas from said sampling pipe; and

a mass spectrometer for introducing the gas passed through said filter from a mass spectrometer side to a downstream side by discharge, and for analyzing the gas and monitoring generated dioxins on the basis of the analysis.

4. An incinerator, comprising:

a mass spectrometric portion for introducing a gas passed through a filter from a mass spectrometric side to a downstream side by discharge; and

a monitoring system for analyzing in said mass spectrometer portion and monitoring generated dioxins on the basis of the analysis, and for controlling operation on the basis of the analysis from said mass spectrometric portion.

5. An explosive detector comprising:

a probe for sampling a sample gas;
a first chamber for introducing said sample gas from said probe;
a needle electrode arranged within said first chamber;
a first opening portion for introducing ions generated in said first chamber into a mass spectrometric portion;
a second opening portion for supplying said sample gas, said second opening portion being located so that an angle formed by a direction connecting said first opening portion and a tip end of said needle electrode, and a direction connecting a center of said second opening portion and said tip end of said needle electrode is less than or equal to 90° ; and
a display for displaying a result of judgment made by a mass spectrometric portion.

6. An explosive detector comprising:

- an inspection object scanning portion for inspecting an object;
- a suction device for sucking a sample gas from said inspection object scanning portion;
- a first chamber for introducing said sample gas from said suction device;
- a needle electrode arranged within said first chamber;
- a first opening portion for introducing ions generated in said first chamber into a mass spectrometric portion;
- a second opening portion for supplying said sample gas, said second opening portion being located so that an angle formed by a direction connecting said first opening portion and a tip end of said needle electrode, and a direction connecting a center of said second opening and said tip end of said needle electrode is less than or equal to 90° ; and
- a mass spectrometric portion for making judgment.

7. An explosive detector as claimed in claim 6, wherein said inspection object scanning portion samples as sample gas with moving said inspection object on a movable base.

